

Application No. 10/047,860

Filed: 1/15/2002

Attorney Docket No.: RSW9-2001-0181US (7161-16U)

IN THE CLAIMS

1. (Original) A database access system comprising:

a universal database connectivity driver having a first exposed interface through which access to a database server can be provided;

a database proxy driver registered with said universal database connectivity driver, said database proxy driver having a second exposed interface which conforms with said first exposed interlace of said universal database connectivity driver, said database proxy driver having a configuration for invoking at least one auxiliary task in addition to providing access to said database server through said first exposed interlace of said universal database connectivity driver; and,

a database driven application programmatically linked to said database proxy driver.

2. (Original) The database access system of claim 1, wherein each of said universal database connectivity driver, database proxy driver and database driven application are disposed in an edge device in a computer communications network.

3. (Original) The database access system of claim 2, wherein said auxiliary task is load balancing.

4. (Original) The database access system of claim 1, wherein said auxiliary task is caching.

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5. (Original) The database access system of claim 1, further comprising:
a log file of data request meta-information; and
an application analyzer configured to tune operation of said auxiliary task based upon said meta-information.
6. (Original) A database access method, the method comprising:
receiving a database connectivity request through a corresponding first exposed database connectivity method from a database driven application;
forwarding said database connectivity request to an underlying database connectivity driver through a corresponding second exposed method having a method prototype which matches a method prototype of said first exposed database connectivity method; and
performing at least one auxiliary task in addition to forwarding said database connectivity request.
7. (Original) The database access method of claim 6, further comprising performing each of the receiving, forwarding and performing steps in an edge device.
8. (Original) The database access method of claim 7, wherein said performing step comprises performing a load balancing task.
9. (Original) The database access method of claim 7, wherein said performing step comprises performing a database caching task.

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10. (Original) The database access method of claim 6, further comprising:
collecting meta-data for each received database connectivity request; and, modifying
operation of said auxiliary task based upon an analysis of said collected meta-data.
11. (Original) The database access method of claim 10, wherein said modifying step
comprises generating rules which direct database connectivity requests to particular instances of
a database server which are most likely to respond quickly based upon database latency patterns
inherent in said collected meta-data.
12. (Original) The database access method of claim 11, wherein said modifying step
comprises selectively caching result sets in a database cache based upon request frequency
patterns inherent in said collected meta-data.
13. (Original) A machine readable storage having stored thereon a computer program for
providing database access, the computer program comprising a routine set of instructions for
causing the machine to perform the steps of:
receiving a database connectivity request through a corresponding first exposed database
connectivity method from a database driven application;
forwarding said database connectivity request to an underlying database connectivity
driver through a corresponding second exposed method having a method
prototype which matches a method prototype of said first exposed database connectivity method;

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and,

performing at least one auxiliary task in addition to forwarding said database connectivity request.

14. (Original) The machine readable storage of claim 13, further comprising performing each of the receiving, forwarding and performing steps in an edge device.

15. (Original) The machine readable storage of claim 14, wherein said performing step comprises performing a load balancing task.

16. (Original) The machine readable storage of claim 14, wherein said performing step comprises performing a database caching task.

17. (Original) The machine readable storage of claim 13, further comprising:
collecting meta-data for each received database connectivity request; and, modifying operation of said auxiliary task based upon an analysis of said collected meta-data.

18. (Original) The machine readable storage of claim 17, wherein said modifying step comprises generating rules which direct database connectivity requests to particular instances of a database server which are most likely to respond quickly based upon database latency patterns inherent in said collected meta-data.

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19. (Original) The machine readable storage access method of claim 17, wherein said modifying step comprises selectively caching result sets in a database cache based upon request frequency patterns inherent in said collected meta-data.